

## ANALYSIS REGARDING THE INSTRUMENTS FOR IMPACT EVALUATION OF EUROPEAN FUNDS ACROSS PRACTITIONERS

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**Abstract:** *The programming period 2007-2013 has come to an end in all EU Member States, the date of 31st March 2017 representing the deadline for sending the final balance of payments on European Structural and Cohesion Funds. Beginning with 2015, the European Commission has launched several reports on impact evaluation of the cohesion policy and its objectives (convergence, regional development and employment, European territorial cooperation); the evaluation instruments are diversifying and there is observed quite a contradiction between different approaches of European Commission's general directorates (DGs): some use macroeconomic models, like Hermin, Quest III or Rhomolo, some use the counterfactual evaluation and some use the econometric methods. Consequently, several authors and practitioners have written interesting articles in standing for an evaluation method or another; the results of their simulations being also contradictory, but the magnitude of conducting impact evaluations at local, regional or national level denotes the difficulty of assessing the efficiency of Structural and Cohesion Funds. The paper proposes an analysis of the official results of the European Commission in relation to the main categories of impact evaluation instruments and some considerations on the private initiatives in this field of interest. It can be affirmed that most of these studies are seeking answers to the basic questions of any evaluation design: besides the "traditional causal question", there are other 4 impact evaluation questions: "to what extent can a specific net impact be attributed to the intervention?; did the intervention make a difference?; how has the intervention made a difference?; will the intervention work elsewhere?" (Department for International Development, 2012: 36-48). There is also needed to make a difference between micro and macro approaches regarding impact evaluation: the micro studies have an informal structure, a high level of disaggregation, a weak use of theories, a judgemental model calibration, an implicit policy impact and an ignored treatment of externalities; on the opposite side, the macro studies have a formal structure, a low level of disaggregation, a strong use of theories, a scientific model calibration, an explicit policy impact and an explicit treatment of externalities (Bradley et al, 2005:7). In the modern practice of evaluation, there can be observed 3 philosophies, according to Tavistock Institute (2003: 21-22): positivism (accepts objective knowledge), constructivism (rejects objective knowledge) and realism (concentrates on interconnections).*

**Keywords:** *Structural; Cohesion; Funds; impact; evaluation; methods.*

**JEL classification:** *C18; E17; O41.*

## 1. Introduction

The system of public transfers based on collective contributions (Becker et al, 2016:2) is sought to increase economic growth, employment rates and investments in underdeveloped zones or regions. The Member States of the European Union (EU) are part of such system, by annually contributing with approximately 1% of national GDP to the common budget. These contributions are redirected by the EU to finance investments in infrastructure, agriculture, education and other major sectors, in order to provide an equalization (Becker et al 2016:2) of economic performance among all Member States. Critics say that such an intermediary body does not provide sufficient guarantees for such ambitious convergence objectives and in contrast to other federal systems, there are neglected several concepts of development, with unclear results on real per-capita income, employment, etc.

A large literature has been developed in the last years, throughout which many simulations of the Structural and Cohesion Funds impact have been carried out in order to demonstrate the positive or negative effects of the cohesion policy: if all of the positive remarks are to be ignored for a moment, there can be observed 3 main criticisms, according to the European Commission (2015:2): the first one states that the cohesion policy is unnecessary and even distortive (by its means, the free market and competition would have been enough, without appealing to regional aid); the second one states that the cohesion policy is inefficient (it alters the optimal allocation of resources across EU); the third one states that the cohesion policy is not effective (not achieving its objectives).

The effects of Structural and Cohesion Funds are different by country, region and time. The relationship between EU transfers and their impact is not known and impact evaluation methods only capture local average effects: variables like the stage of development, the quality and quantity of social capital, the potential demand are not described well enough in order to capture the lower return on investments and per capita income growth effects in the Member States.

It has been acknowledged by Becker et al (2016:3) that the effects are stronger when analyzing more programming periods together, in comparison with studies which approach only the most recent programming period.

According to the Centre for European Policy Studies (2014:3), the economic impact of EU transfers is estimated to be a multiple of the size of EU GDP. Furthermore, the same author suggests that 0.5% of the EU GDP generated another 1% GDP net impact, during the 2007-2013 programming period; in addition, the Cohesion Policy (equivalent to 0.4% of EU GDP) generated another 1% GDP net impact.

If limited absorbing capacities are to be taken into account, then the above shares are quite positive, as some regions use EU transfers increasingly inefficiently as they receive more transfers (European Commission, 2016a).

There may also be the nature of the „depressed state” of EU Member States economies (European Commission, 2016d:22), which could have molded the EU funding as a source for development expenditure: however, fiscal consolidation measures have restricted the assurance of mandatory co-funding for the public sector and have limited the demand for funding for the private sector. Related to the above shares, the outcomes are quite negative, because of the delays in spending and the misallocation of funds to areas and projects where it could be spent more quickly. Indeed, as Becker et al (2016:2) point out, there have been induced positive

average effects, but more expenses did not generally induce proportionately larger effects.

## **2. Econometric analysis methods**

Usually, the method of econometric analysis reveals a reduced impact of Structural and Cohesion Funds on GDP growth (a lower impact than counterfactual evaluations or macroeconomic models).

Three important issues are discussed by the practitioners of econometric analysis, the first is the relevance of the theoretical framework (the “old” neoclassical growth model versus the “new” economic geography approach); the second is the separation of Cohesion Policy transfers from the impact of the other factors of economic growth (European Commission, 2015:4). Thirdly, econometric analysis do not always use real data about the amounts of absorbed Structural and Cohesion Funds and do not provide consistent data series on EU Member States.

Another problematic aspect is given by the fact that regression models use independent variables from the other dependent variables, but since this type of econometric method assesses implicitly the correlation between initial GDP level and Structural and Cohesion Funds, obviously, there is a higher degree of Cohesion Policy transfers to poorer regions.

## **3. Counterfactual impact evaluation methods**

There are several methods for counterfactual impact evaluation and among research studies, many of them use randomization, propensity score matching, difference in differences, regression adjustment techniques, regression discontinuity design and instrumental variables (Centre for Research on Impact Evaluation, 2014:10). Several authors indicate that the best methods out of the above mentioned ones are those which require the least restrictive assumptions.

The European Commission (2016c) used propensity score matching and regression discontinuity design for assessing the macro-economic effects of cohesion policy during 1994-1999, 2000-2006 and 2007-2013 programming periods. The propensity score matching method has revealed that the impact of Structural and Cohesion Funds on EU Member States consisted in an annual growth of per-capita GDP ranging from 0.5% to 0.7%, and about 0.1% annual growth for employment rates. The regression discontinuity design method has led to similar results, but a lower annual growth of per-capita GDP, of only 0.4%.

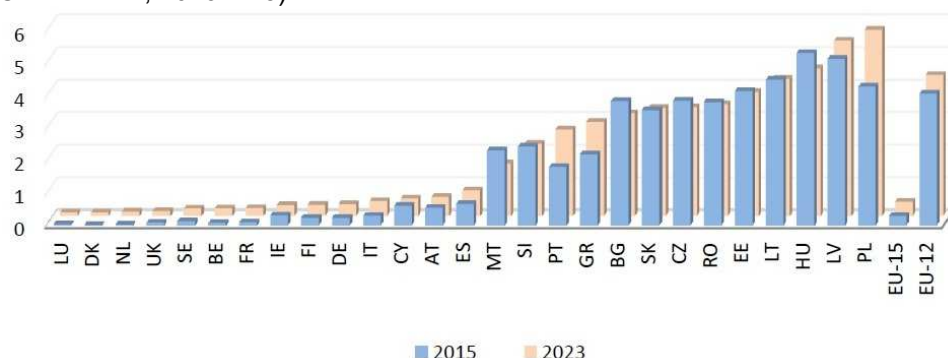
## **4. Macroeconomic modelling methods**

Macroeconomic models have a larger use in the impact evaluation methodology and are usually implemented for extended periods of estimations, because they provide solid short term and long term impacts of cohesion policy, taking into account direct and indirect effects. Another advantage is that macroeconomic models include spill-over effects and externalities, being used for large sets of country panels.

With regards to the economic and financial impact of fiscal transfers, the cohesion policy is assessed on general EU level by QUEST III model and on each individual Member State by HERMIN model. The International Monetary Fund has also

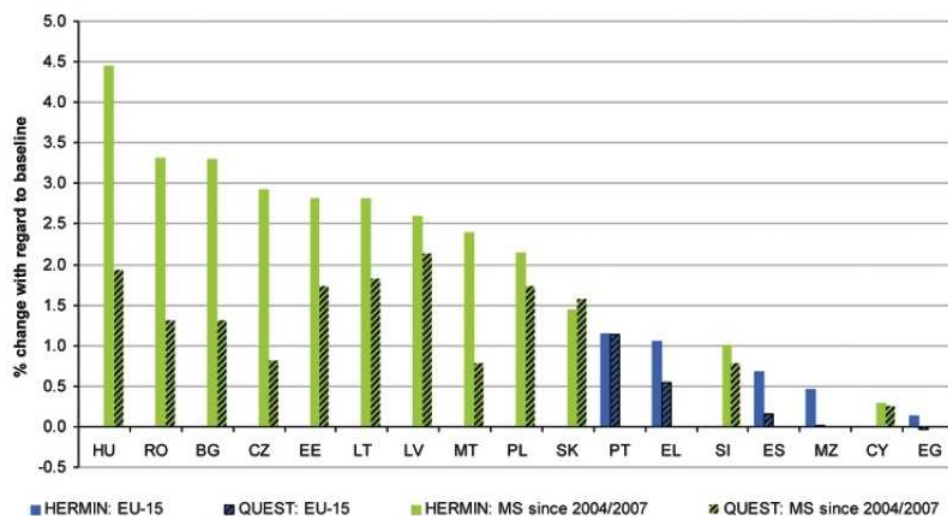
evaluated the impact of cohesion policy by its GIMF model. These models were explained in a previous paper of the authors (Popescu et al, 2016).

From QUEST III simulations it can be deduced that 1 Euro invested in the EU Member States during 2007-2013 (extended by n+2, n+3 rule) is equal to 0.78 Euro in GDP by 2015 (short term) and to 2.74 Euro by 2023 (long term) (European Commission, 2016b: 23).



**Figure 1:** Impact of cohesion and rural development policy on GDP (QUEST III)  
Source: European Commission, 2016b: 18

Taking into consideration the increased impact on GDP (Figure 1), QUEST III simulations suggest that by 2015 the GDP of EU-12 (Member States which joined EU after 2004) grew by 4,1%, because of the extended per capita allocations: Hungary (+5.3%), Latvia (+5.1%), Poland (+4.3%). As can be seen in Figure 1, EU-15 (Member States which joined EU before 2004) provide a modest but substantial impact: Greece (+2.2%), Portugal (+1.8%), Spain (+0.7%).



**Figure 2:** Average annual impact on GDP 2007-2016  
Source: European Commission, 2012:8

Figure 2 show the annual impact of cohesion policy on both EU-12 and EU-15, simulated by QUEST III and HERMIN macroeconomic models. The difference is obvious, HERMIN model having a more overestimated impact on GDP, as we have stated before, in our previous paper (Popescu et al, 2016).

There is another model used by the European Commission, called RHOMOLO, a computer-based model which emulates region-specific expenditures into a simulation of each region's GDP growth. The estimated growth is higher for less developed regions (between 1% and 6% of GDP) and lower for transition regions, respectively for more developed regions (between 0.1% and 1% of GDP) (<https://ec.europa.eu/jrc/en/rhomolo>, accessed 14.04.2017). The model was built on the same basis like QUEST III, being used for policy impact assessment on human capital, transport infrastructure, research and development, innovation.

## 5. Conclusions

It is very difficult, in reality, to assess the economic impact of cohesion or rural development policies of the EU: first of all, because monitoring data cannot provide information on net impacts, at most they can illustrate the output / outcome of the interventions; second of all, analytical instruments are required (econometric methods, counterfactual methods, macroeconomic models) which use a very technical language and are not accessible to the wide public.

Further on, a differentiation must be made between the short term (demand) effects and long term (supply-side) effects, when analyzing the behavior of macroeconomic variables (European Commission, 2016b): short-term effects are relevant during the implementation period, creating the paradox that people and firms, by earning more, they also consume more (the multiplier effects); the long-term effects appear after increased productivity (feedback effects).

A current mistake in the approaches of impact evaluations is that GDP is targeted as the main variable and the effects on GDP are sought to remove development disparities across European regions; there are also targeted variables which may always give positive results on a funding intervention: employment rate or social inequalities (European Commission, 2016a).

As we mentioned in our previous paper (Popescu et al, 2016), it is worth taking into consideration the "with funding scenario" and the "without funding scenario", because the allocation of Structural and Cohesion Funds coincides with a wide spectrum of internal policy actions and external policy developments aimed at the national economies of the Member States (European Commission, 2016b).

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